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Direct Seeding (1939)

June 27, 1939.

NOTES ON INSPECTION OF CLEAR CREEK DIRECT SEEDING

PLOTS ON JUNE 27, 1939.

General

A hasty inspection showed that this seeding is essentially a complete failure, due principally to the entry of the screen cones by rodents and to an unknown degree to the fact that the plots were not planted until spring of 1939. While there is no direct proof for the statement, it is thought that the spring planting was not in itself the major cause for failure, inasmuch as the seeding was done almost as promptly after snow melted on the three sites as was possible and while the soil was still moist and apparently favorable for germination. Partial germination on many of the competition plots which were seeded later in the spring indicates that it would have been at least as good and probably better on these direct seeding plots if the seed had not been destroyed.

No detailed tally of seedspots was made, but in order to obtain a complete picture of the situation for the possible benefit of future seeding on this plot or elsewhere, the examiner walked along each two rows at a time through all three plots, making rough counts of cones off, etc. as noted below. None of the cones which were tipped over or disturbed was replaced, as it appeared that the damage had already been done. It is probable that some seed which failed because of dryness to germinate this year may come up next spring, but the fact that so few good seed were found in any spot tested indicated that it was not worth while trying to keep the cones in place for the benefit of such few spots.

It did not appear that disturbance of the cones by livestock has been a material factor to date, altho this had been feared. Sheep had been in the vicinity this season, but apparently none on the plots themselves. Horses were grazing in the flat near the corrals below, but no fresh tracks were seen on the plots. It may be of some interest to check on this item of livestock presence and disturbance by evidence later in the year if the plots should be reseeded. None of the disturbed screens was crushed.

Most of the seed destruction seemed to be in the form of complete removal by small rodents, probably mice, which had burrowed under the edge of cones (or tipped them over). Very few seed hulls were noted, and no cases of stubs of seedlings nipped off, as was common on some of the other seeding plots. (There may have been some few stubs, especially if dried up, not evident in the gross inspection method used.)

South Aspect

Nine large and 15 small cones were entirely tipped over and off of the original spot. Ninety large cones and 48 small cones appeared either loose or distinctly tunnelled under by rodents; mostly the latter condition, as the cones even in unprepared spots appeared to have been set with as good contact as would normally be obtained with reasonable care. (Total cones on each plot: 150 large and 120 small. Slight shortage on South plot small cones, as noted before.) No very fresh rodent work was evident -

all took place before the last rain (June 15-19). Rough examination of a few rodent-entered spots showed no good seed left. Probably nearly all of the cones were entered but showed no evidence now as the dirt could have washed in and the screen settled again after disturbance. Even those which appeared so well and deeply set that they were classed as definitely showing no disturbance contained no good seed according to a partial test. Ground squirrel tracks and burrows were noted in vicinity, but no squirrels seen.

Only 1 seedling was found - in spot #4 of Row SN, large cones.

Soil is dust dry for top 2 or 3 inches or more, but appeared fresh enough to support seedlings below about 6" depth in unprepared ground and 3 or 4" in most of the prepared spots.

There is notably little vegetation on the plot: scattered Geranium, Bromus tectorum, Gayophytum, Carex geyeri, and Salix sprouts. Density for the plot as a whole is estimated at 1 to 2 percent.

North Aspect

Three large cones and 20 small cones were off of spots; removal probably mostly if not entirely caused by rodents. 108 large cones and 82 small cones (practically all) showed small rodent burrows, as on South. Only one spot was found with sound seed in it in a rough partial check. Even those with seedlings present had been entered - apparently an occasional seed was overlooked. Other notes as for South apply, except vegetation and soil.

Seedlings were found as follows:

| Large Cones | | | | Small Cones | | |
|---|---|---|---|---|---|---|
| Row | Spot | No. Sdlgs. | | Row | Spot | No. Sdlgs. |
| SL | 6 | 2 | | FlL | 6 | 1 |
| JS | 4 | 1 | | AS | 8 | 1 |
| | 5 | 1 | | JN | 10 | 1 |
| AN | 6 | 1 | | JS | 6 | 1 |
| AL | 7 | 1 | | | 7 | 1 |
| AS | 1 | 1 | | | | |
| | 2 | 2 | | | | |
| Total | | 9 on 7 spots | | | | 5 on 5 spots |

Soil moisture is more favorable than on South - surface dry to only 1 to 2", fresh below. Not much difference in prepared and unprepared spots at this time.

Vegetation density about 1% on east 1/3 of plot, increasing to 5% on west 1/2 of plot; mostly grass and sedge (Calamagrostis rubescens and Carex geyeri) and Salix sprouts; a few bitterbrush (Purshia) sprouting.

Flat Aspect

Twelve large cones and 61 small cones were knocked over or off the spot entirely. Of the remainder, 92 large and 45 small cones appear definitely to have been entered by rodents, usually through small burrows as on other plots. Several cases of raising of screen by growing vegetation were noted here - some of them on prepared spots. Ground squirrel tracks and runways fairly abundant; one seen on plot. A little rodent digging has occurred since rains, but mostly earlier. Only one sound seed was found in a partial rough check of both apparently undisturbed and rodent-entered spots.

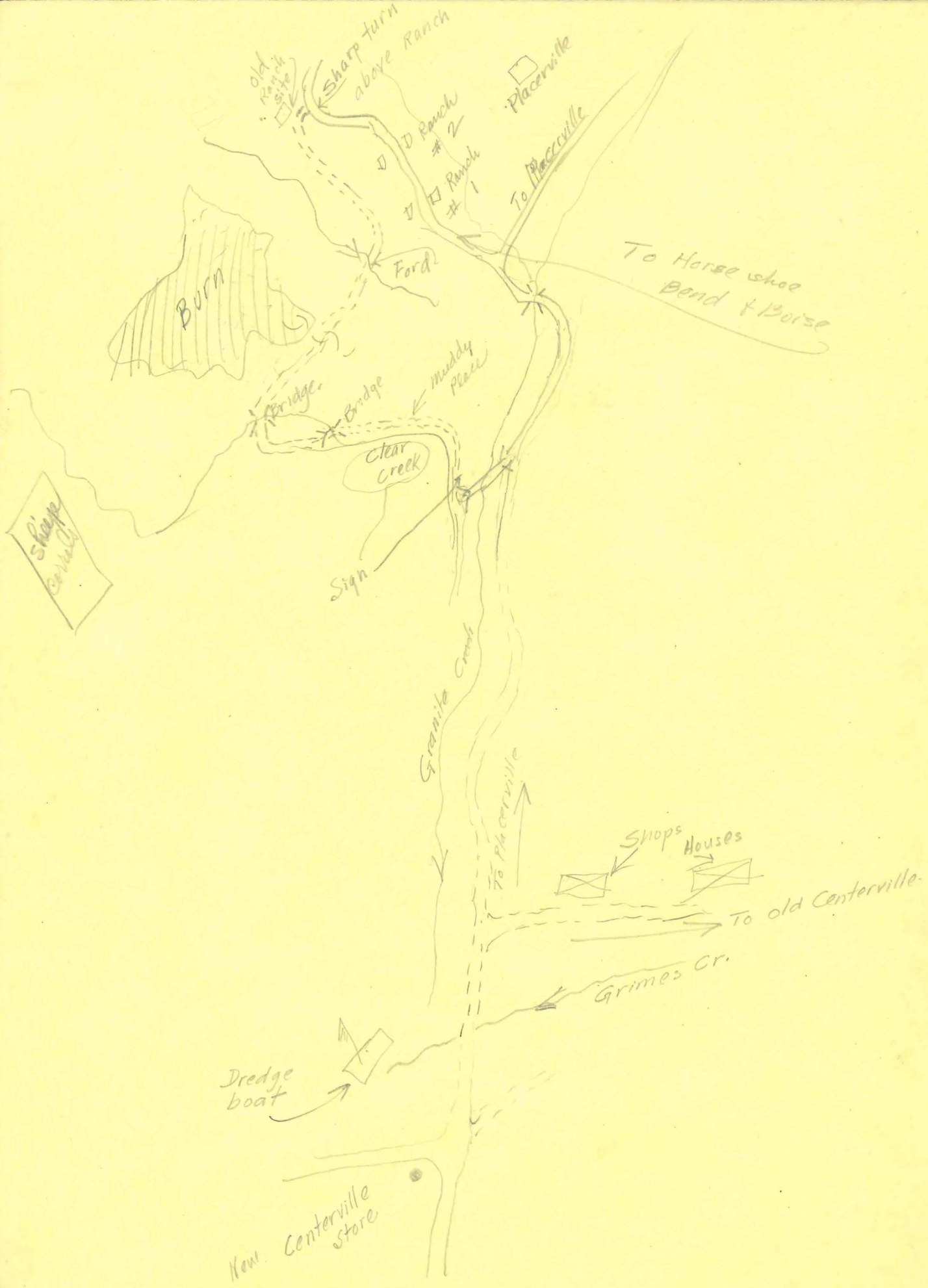
Seedlings were found as follows:

| Large Cones | | | | Small Cones | | |
|---|---|---|---|---|---|---|
| Row | Spot | No.Sdlgs | Notes | Row | Spot | No. Sdlgs. |
| AL | 4 | 1 | Moist | SS | 5 | 1 |
| F1S | 4 | 1 | Moist | | | |
| JL | 3 | 1 | | | | |
| AN | 5 | 7 | Wet | | | |
| AS | 7 | 1 | Moist | | | |
| SL | 4 | 1 | Moist | | | |
| | 7 | 2 | Moist | | | |
| F2S | 4 | 7 | Fresh | | | |
| F1L | 7 | 1 | Moist | | | |
| Total | | 22 on 9 spots | | | | 1 on 1 spot |

Soil moisture is sufficient to maintain seedlings on all spots; surface dry to 2 to 4" depth at ends of rows on two slopes; moist on surface in lower central draw bottom. Ashy loose surface in some spots probably quick-drying and thus not favorable for germination noted here and on south and on part of north. Soil is in general hard-packed on flat and south (possibly from old sheep trampling) which would make penetration difficult in unprepared spots; gives soil cultivation an especial advantage. Prepared spots are moist nearer the surface in dryer portions of plot; not much difference in draw bottom.

Vegetation density very variable - parts of plot were burned very little or not at all; others had logs or heavy slash which burned severely; some spots were scraped by fire-fighting caterpillar. Density thus varies from 0 on hard-burned and scraped spots to 80% over areas of several square feet in the draw bottom. Cover all low; chiefly Bromus tectorum, Carex geyeri, and Spiraea, with other small grasses, etc. in moist portions.

E. L. Mowat.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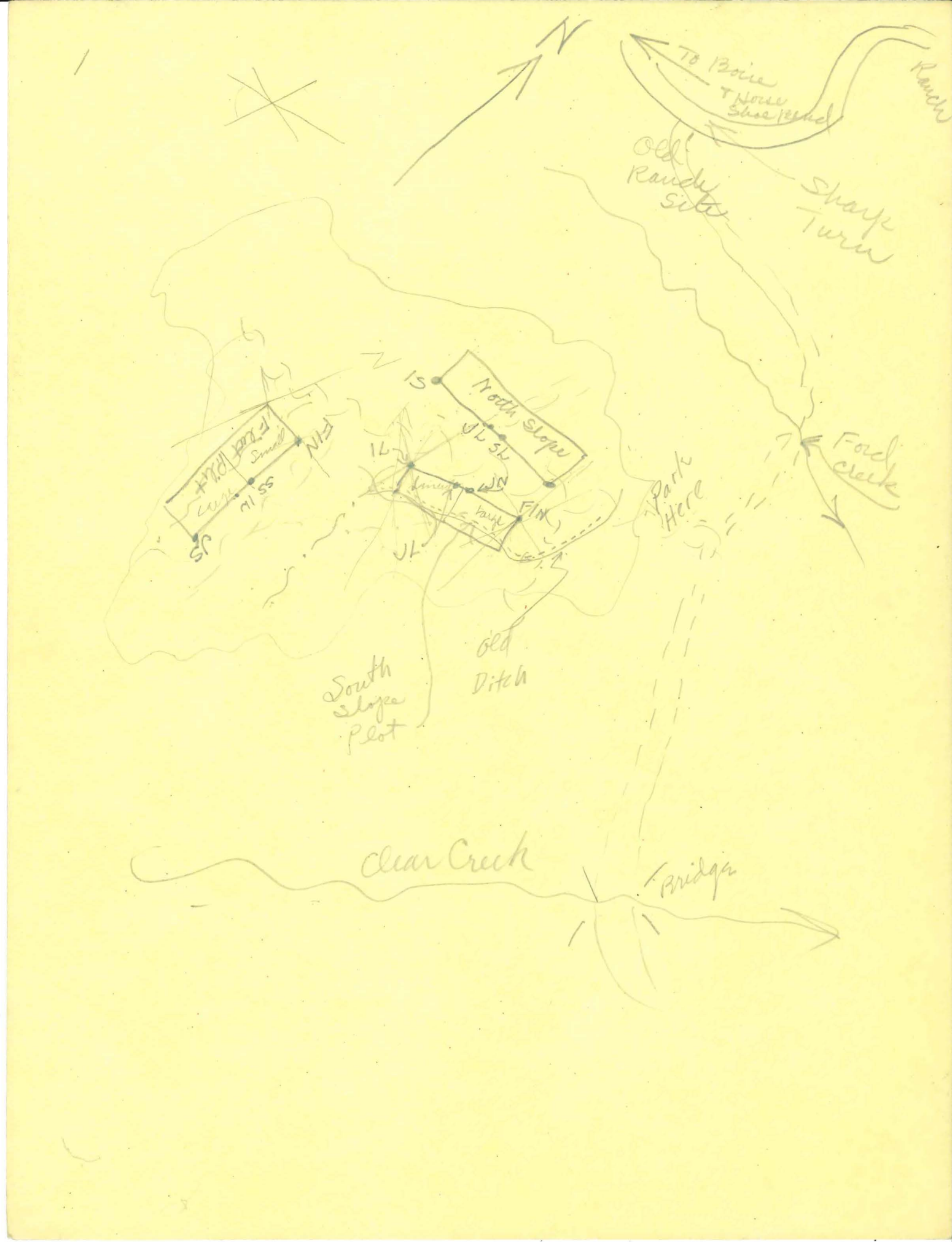
Placerville
D Ranch #2
D Ranch #1
To Placerville
To Horse shoe Bend + Boise
Burn
Ford
Bridge
Bridge
Muddy Place
Clear Creek
Sharp curve
Sign
Granite Creek
To Placerville
Shops
Houses
To old Centerville
Grimes Cr.
Dredge boat
New Centerville store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